



NOvA Experiment Status

Steve Magill Argonne National Laboratory
All Experimenter's Meeting, September 30, 2013

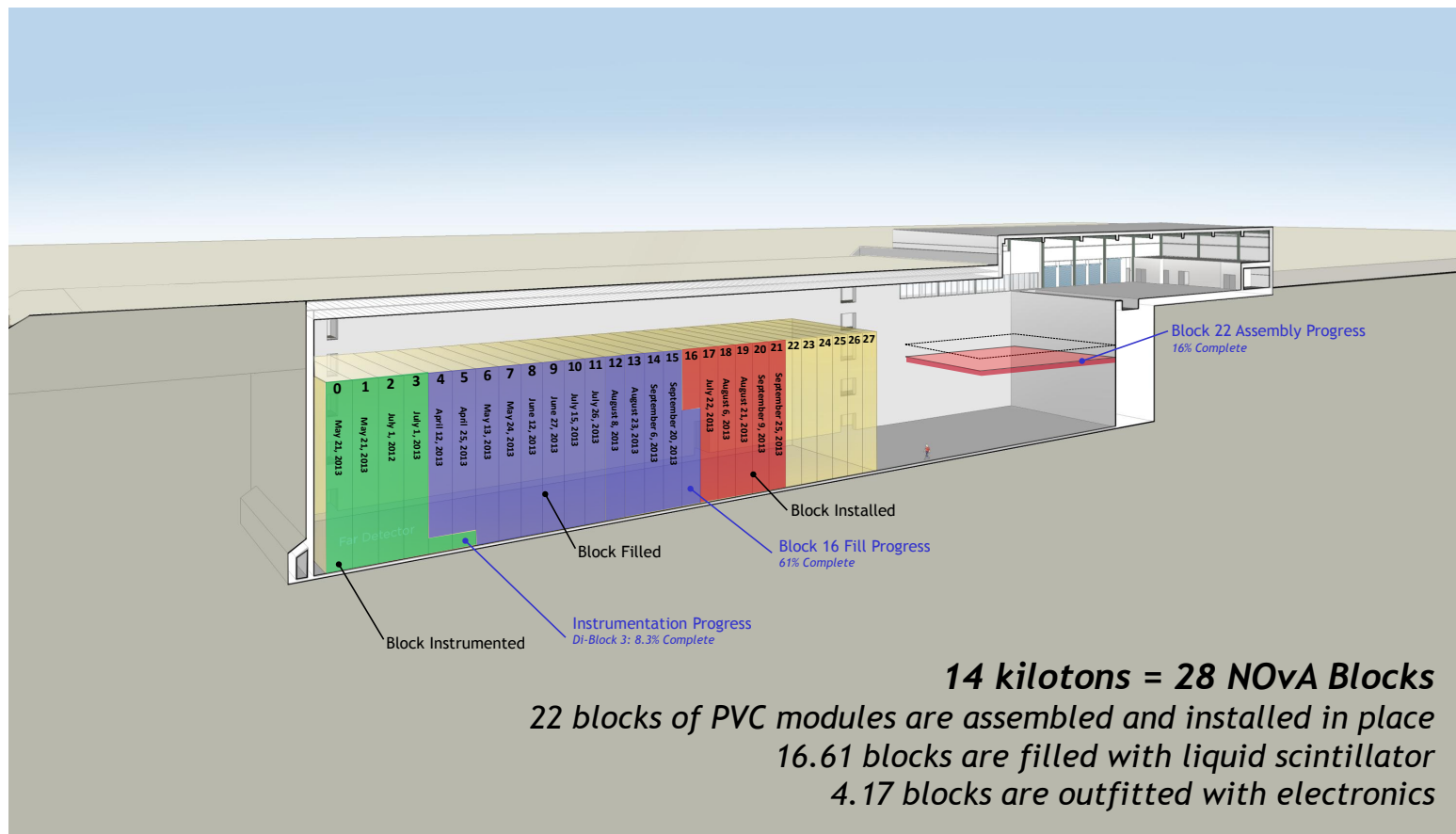
Far Detector Progress



The Intensity Frontier

NOvA Far Detector Assembly Progress

Status Date: 30SEP13



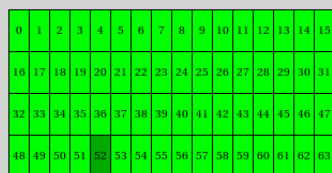
S. Dixon

FarDet APD Cooling – 09/26

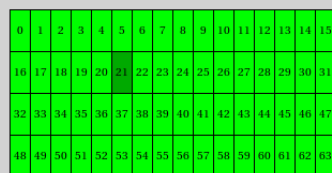
DCS - APD Temperature Monitor

Far di-block 01 Overview

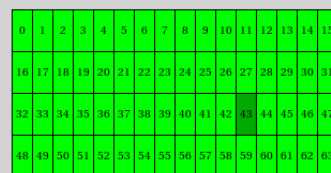
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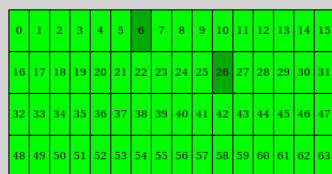
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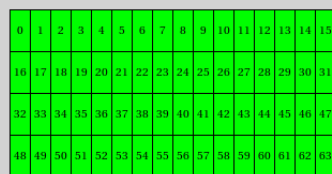
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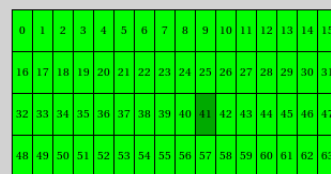
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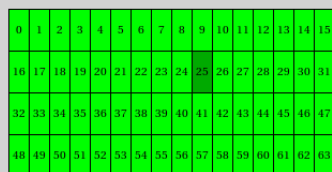
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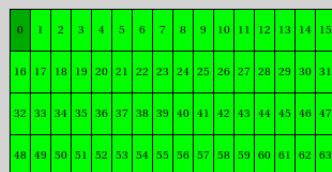
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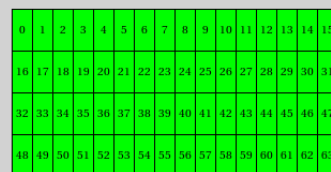
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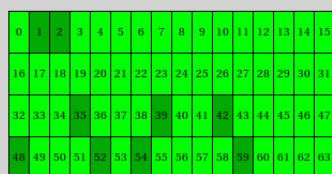
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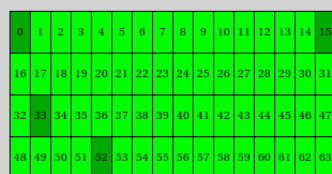
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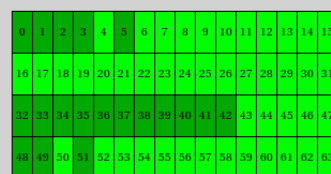
dcm-2-01-09



dcm-2-01-10



dcm-2-01-11



dcm-2-01-12

Light green – cooled
Dark green – warm

Go back to
DCS Startup and

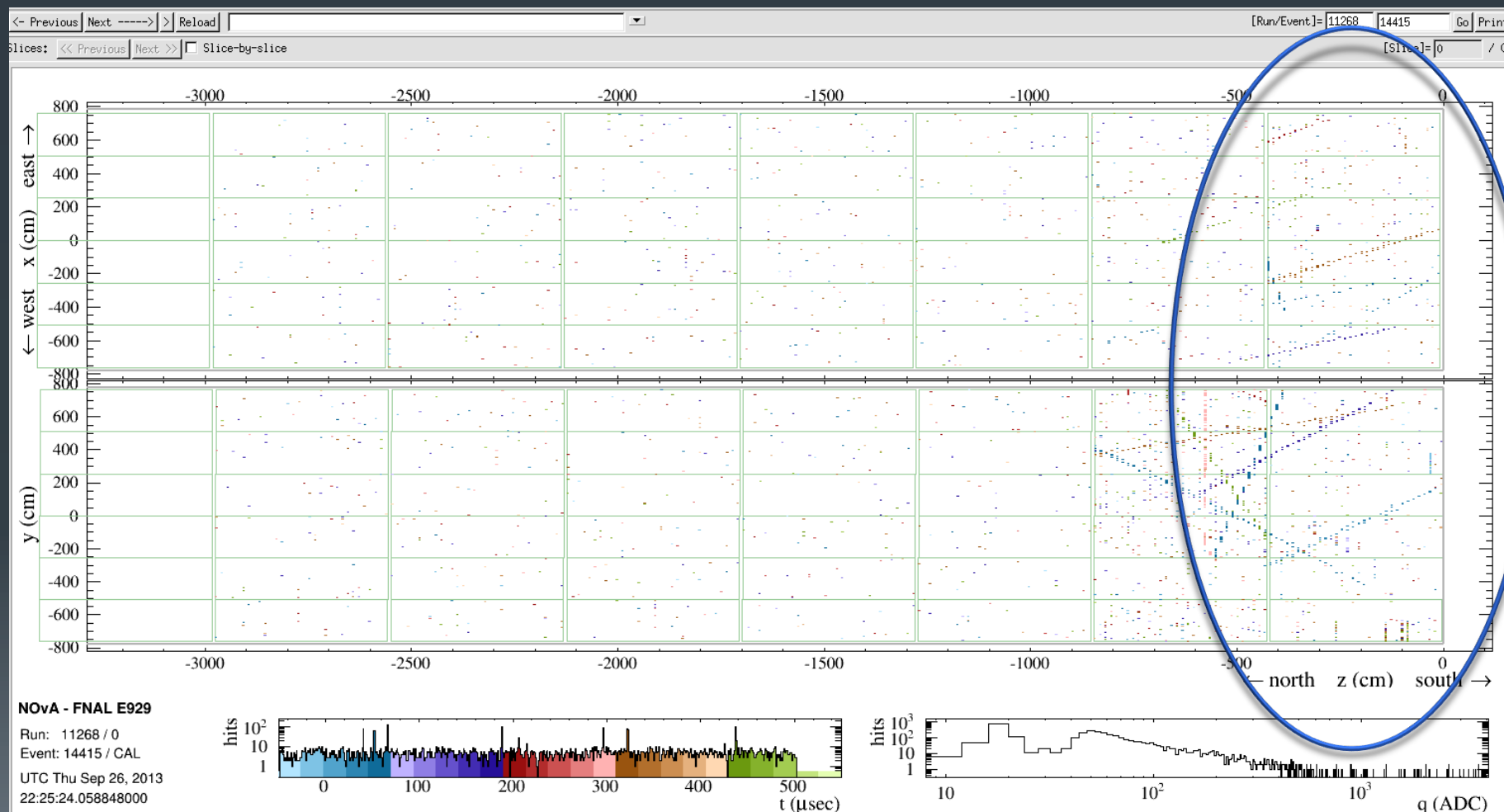
Diblock 01 - Cooling enabled
Light green – cooled
Dark green – warm

Shown by Data Concentrator
Module (DCM)

64 FEBs/APDs per DCM
2048 channels per DCM

Mostly minor problems
caused shutdown of cooling
to some APDs

Events with APD Cooling On



1st test of APD cooling on diblock 01

Near Detector UnderGround (NDUG)



Beam's-eye view



NDUG Outfitting



- Power Distribution Boxes and Data Concentrator Modules installed
- Testing for leaks after block transport/ installation



Near Detector Schedule



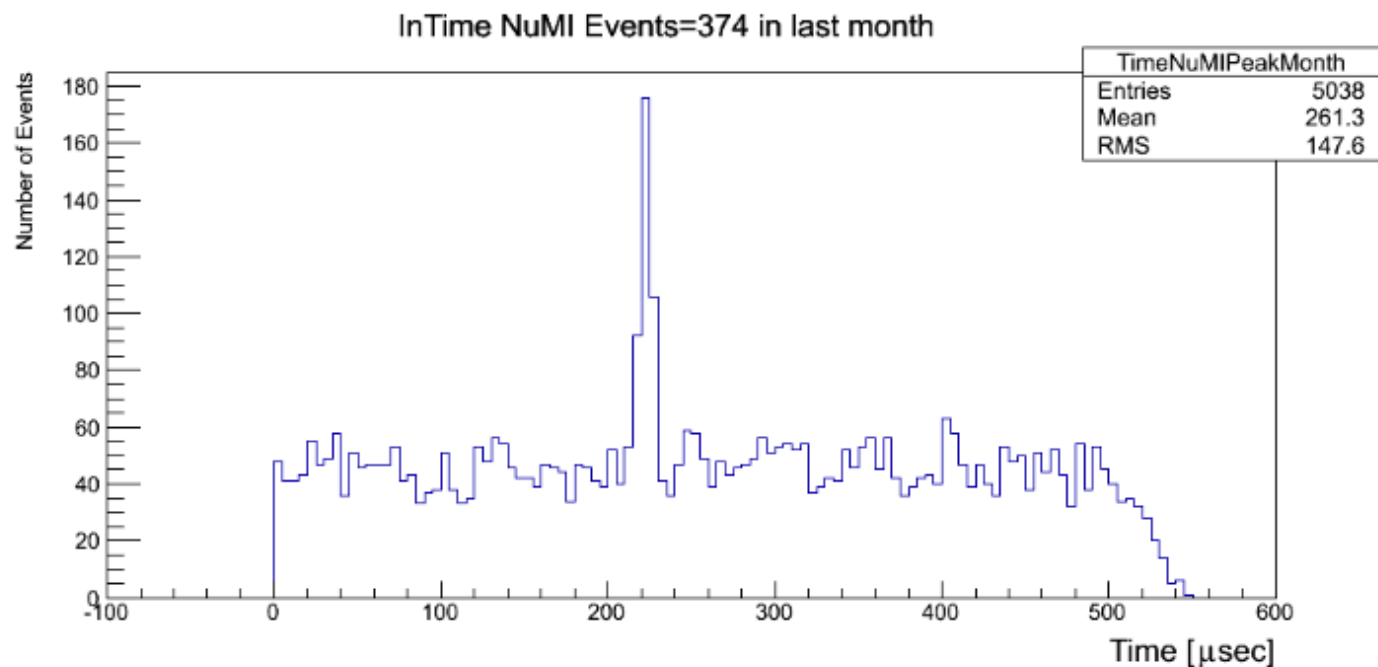
October Schedule and Manpower Needs



- **Block #3 installation**
 - ✧ *Assembly: Sept 18 – Oct 1, 4MT; Transfer to MSB: Oct 2 – 3, 4MT*
 - ✧ *Module position survey: Oct 7-8; Installation: Oct 9, 4MT*
- **Block #4: assembly: Oct 3 – Oct 17, 4MT; Installation: Oct 23, 4MT**
- **Block #5: assembly: Oct 21 – Nov 1, 4MT; Installation: Nov. 6, 4MT**
- **Power supplies installation and cabling: Sep. 30 – Oct 4**
 - ✧ Tasks for pORC approval
- **1st di-block PDB/DCM installation and cabling: Oct 10-24**
 - ✧ 3 Physicists, 2 weeks, 4hr MT
 - ✧ WBS 2.8.4.5-8 see CR660 (docDB 9821)
 - ✧ *Q: What does it take for RC to read out muon catcher+ 1st di-block?*
- **DCS sensors and cameras installation Oct 7-31**
 - ✧ 3 physicists, 4 weeks?
 - ✧ Sensors installation and cabling, PLCs -> iFIX
 - ✧ *Network for cameras?*
- **QA/QC system: \$4K for bar-code scanner, PC and paper**

NUMI Beam Timing in NDOS

NDOS Timing Peak for last month



- NOvA prototype detector still running continuously
- Useful for beam timing measurements, FarDet prediction
- Test Stand (30 APDs) used to study APD noise rates

Summary

- Continue to take data at Far Detector
 - 2 kilotons with full electronics (warm APDs at nominal gains)
 - Total of 8 kilotons with scintillator, Front-end boards
- First operation of Diblock 01 with cooled APDs
- Near Detector installation continuing
 - Readout of muon catcher + 1 diblock – end of October
- NUMI beam seen in NDOS
 - Continuing to monitor with beam